

**INFORMATION Redacted PURSUANT TO THE FREEDOM OF  
INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)**



August 17, 2011

**VIA EXPRESS MAIL**

Mr. Bruce York, Acting Division Chief  
Medium and Heavy Duty Vehicle Division  
Office of Defects Investigation  
U.S. Department of Transportation  
National Highway Traffic Safety Administration  
1200 New Jersey SE  
Washington, D.C. 20590

Re: **RQ11-001**  
**NVS- 210njs**

Dear Mr. York,

Please find below Volvo Truck North America's ("Volvo") responses to specific questions raised in your letter of June 23, 2011. In some areas, I have provided additional information, which I believe, may be helpful in conducting your evaluation.

As always, we consider information on our customer's to be confidential. Therefore, any information regarding customer names, addresses and contact information must be blacked out before release to the NHTSA public website.

With Best Regards,

A handwritten signature in black ink, appearing to read "Tim L. LaFon", with a long horizontal flourish extending to the right.

Tim L. LaFon  
Director, Regulatory Affairs  
Volvo Truck North America  
Telephone: (336) 393-2233  
Email: [timothy.lafon@volvo.com](mailto:timothy.lafon@volvo.com)

1. State by make, model, and model year, the number of subject vehicles VOLVO has manufactured for sale or lease in the United States. Separately, for each vehicle manufactured to date by VOLVO, state the following:

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Part number(s) of the subject components;
- f. Date of manufacture; and
- g. Date warranty coverage commenced.

Make	Model	Model Year	Count
Volvo	VNL	2002	1,973
Volvo	VNL	2003	4,839
Volvo	VNL	2004	8,333
Volvo	VNL	2005	11,554
Volvo	VNL	2006	11,796
Volvo	VNL	2007	16,077
Volvo	VNL	2008	6,919
Volvo	VNL	2009	5,107
Volvo	VNL	2010	3,160
Volvo	VNL	2011	5,691
Volvo	VNL	2012	5,431
Volvo	VT	2004	1
Volvo	VT	2005	8
Volvo	VT	2006	201
Volvo	VT	2007	194
Volvo	VT	2008	107
Volvo	VT	2009	35
Volvo	VT	2010	5

Source of information: Volvo's Warranty database. The information was gathered on August 5, 2011.

Specific information is included in the enclosed file under the heading of "PRODUCTION DATA".

Note: Some of the vehicles did not have warranty registration dates. Therefore, some of the warranty registration cells were left blank.

2. State the number of each of the following, received by VOLVO, which relate to, or may relate to, the alleged defect in the subject vehicles:

Type	Total Number
a. Consumer Complaints including those from fleet operators;	4
b. Field Reports, including dealer field reports;	45
c. Reports involving a crash, injury, or fatality	0
d. Reports involving a fire;	0
e. Property damage claims;	0
f. Third- party arbitration proceedings	0
g. Lawsuits	0

For subparts "a" through "g", state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report, and a consumer complaint).

In addition, for items "c" through "g", provide a summary description of the alleged problem and causal and contributing factors and VOLVO's assessment of the problem, with a summary of significant underlying facts and evidence. For items "f" and "g", identify the parties of action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Source of information: Volvo's Service Database and Legal Department. The information was gathered on August 9, 2011.

3. Separately for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
- VOLVO's file number or identifier used;
  - The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
  - Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
  - VIN;
  - Vehicle's make, model, and model year;
  - Vehicle's build date;
  - Part number(s) of the subject component(s);
  - Vehicle's mileage at the time of the incident;
  - Incident date;
  - Report or claim date;
  - Whether a crash is alleged;

- l. Whether a fire is alleged;*
- m. Whether property damage is alleged;*
- n. Number of alleged injuries, if any; and*
- o. Number of alleged fatalities, if any.*

Source of information: Volvo's Service Database and Legal Department. The information was gathered on August 9, 2011.

Specific information is included in the enclosed file under the heading of "REQUEST NUMBER TWO DATA".

Note: Some of the file identifier's contain an "S" in parenthesis. For example, 1-3975707 (S) is stated in the 5<sup>th</sup> row of the worksheet. The "S" signifies that the report was made in Volvo's old service system, which has since been replaced. Records with the "S" will be in an excel format while the other reports are in a pdf format.

- 4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method VOLVO used for organizing the documents.*

The copies of the documents are separated into three files named, "Copies of [REDACTED] (Field Reports)", "Copies of [REDACTED] (Customer Complaints)", and "VPSS comments search(1)."

Argus is our current service system. The [REDACTED] files are separated by category, field report and customer complaint, and have a detailed report for each that is preceded by all documents or pictures that were attached to the case file.

The VPSS file is a snapshot of what is available from the historical files from the old service system.

Source of information: Volvo's Service Database and Legal Department. The information was gathered on August 9, 2011.

- 5. State by make, model, and model year, a total count for all of the following categories of claims, collectively, that have been paid by VOLVO to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for goodwill services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.*

*Separately, for each such claim, state the following information:*

- a. VOLVO'S claim number;*
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;*
- c. VIN;*
- d. Vehicle's make, model and model year;*

- e. *Vehicle build date;*
- f. *Part number(s) of the subject component(s);*
- g. *Repair date;*
- h. *Vehicle mileage at time of repair;*
- i. *Repairing dealer's or facility's name, telephone number, city and state or ZIP code;*
- j. *Labor operation number;*
- k. *Problem code;*
- l. *Replacement part number(s) and description(s);*
- m. *Concern stated by customer; and*
- n. *Comment, if any, by dealer/technician relating to claim and/or repair.*

Make	Model	Model Year	Count
Volvo	VNL	2002	23
Volvo	VNL	2003	367
Volvo	VNL	2004	38
Volvo	VNL	2005	43
Volvo	VNL	2006	11
Volvo	VNL	2007	138
Volvo	VNL	2008	98
Volvo	VNL	2009	402
Volvo	VNL	2010	601
Volvo	VNL	2011	39
Volvo	VNL	2012	2
Volvo	VT	2004	0
Volvo	VT	2005	0
Volvo	VT	2006	4
Volvo	VT	2007	10
Volvo	VT	2008	2
Volvo	VT	2009	4
Volvo	VT	2010	0

Source of information: Volvo's Warranty Database. The information was gathered on August 8, 2011.

Specific information is included in the enclosed file under the heading of "WARRANTY DATA".

6. *Describe in detail the search criteria used by VOLVO to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers, and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles.*

The search criteria used for Request No. 5 was twofold. First, all warranty records pertaining to the subject vehicles were filtered for the word "WINDOW". The results were further filtered by the words "LOOSE", "FALL", "FELL", "BLEW", "BLOWN", or

“MISSING”. The results were then individually read to determine relevance to this inquiry. Secondly, all warranty records pertaining to the subject vehicles were filtered by part number pulling in all claims that referenced any of the bunk window part numbers used in the subject vehicles. The claims were then individually read to determine relevance to this inquiry.

Note: Some of the warranty claims involve vehicles subject to the recall. For example, row number 15 states, “SLEEPER WINDOWS FELL OUT. REPAIR PER RECALL RVXX1001. REPLACED BOTH.”

7. *State, by make, model and model year, the terms of the vehicle warranty coverage offered by VOLVO on the subject vehicles relative to the subject components. Describe any extended warranty coverage option(s) that VOLVO offered for the subject vehicles and state by make, model, and model year, the number of vehicles that are covered under each such extended warranty*

The windows are covered under the basic or standard warranty which is 1 yr, 100,000 miles or 3250 operating hours. Extended warranty coverage can also be purchased that extends the coverage period.

Source of information: Volvo’s Warranty Group. The information was gathered on August 8, 2011.

Note: At the time of this submission, the number of extended warranties sold was not available.

8. *Produce copies of all service, warranty, and other documents that relate to, the subject component in the subject vehicles, that VOLVO has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, or other documents or communications. Also include the latest draft copy of any communication that VOLVO is planning to issue within the next 120 days.*

The documents are enclosed under the heading of response to number eight and are arranged in chronological order.

Source of information: Volvo’s Regulatory Affairs and Service Publication Groups. The information was gathered on August 16, 2011.

9. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries, and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for VOLVO. For each such action, provide the following information:

- a. Action title or identifier;
- b. The actual or planned start date;
- c. The actual or expected end date;
- d. Brief summary of the subject and the objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

See enclosed excel spreadsheet labeled "Response to Question 9" that provides a summary of all assessments/investigations involving the subject components. Supporting documents are included with a cover sheet stating the action title/ identifier. The documents are arranged in chronological order.

Source of information: Volvo's Regulatory Affairs and Product Development Groups. The information was gathered on August 17, 2011.

10. Describe all modifications or changes made whether or not by, or on behalf of, VOLVO in the design, material composition, manufacture, quality control, supply, or installation of the subject component. For each such modification or change, provide the following information"

- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;
- d. How the modification may influence aging/ durability of the window installation;
- e. The effect on the subject component failure rate that the modification had;
- f. The part number(s)(service and engineering) of the original component;
- g. The part number(s)(service and engineering) of the modified component;
- h. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
- i. When the modified component was made available as a service component; and
- j. Whether the modified component can be interchanged with earlier production components.

*Also, provide the above information for any modification or change that VOLVO is aware of which may be incorporated into vehicle production within the next 120 days.*

See enclosed excel spreadsheet labeled "Response to Question 10" that provides a summary of all changes that Volvo is aware of. Additionally, a one page quick reference guide that shows the part numbers and when they were used is enclosed.

Source of information: Volvo's Product Development Group. The information was gathered on August 8, 2011.

*11. Describe how the decision to recall was made for each of the previous recalls; 03V-038, 10V-086, and 10V-359. Provide any supporting documentation that was used to make these decisions.*

See "Response to Question 9" that includes information on the recalls.

Source of information: Volvo's Regulatory Affairs. The information was last gathered on August 17, 2011.

*12. For each recall describe how the affected vehicle population was determined.*

See "Response to Question 9" that includes information on the recalls. The defect information reports as required by 49 CFR Part 573 also includes this information.

Source of information: Volvo's Regulatory Affairs. The information was last gathered on August 17, 2011.

*13. State the number of each of the following that VOLVO has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), make, model and model year of the vehicle in which it is used and month/year of sale:*

- a. Subject component; and*
- b. Any kits that have been released, or developed, for use in service repairs to the subject component/assembly.*

*For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which VOLVO is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.*

The following table includes aftermarket sales information for the years of 2008 through 2011. The information prior to 2008 is not available.

	2008	2009	2010	2011
8078613	728	242		
20582366		818	364	
21512736			3232	742
82708889				389

8078614	642	174	4	
20582367		801	323	
21512737			3015	688
82709958				244

8078615				
20995451				
21025116	114	109	197	75

8078616				
20995453				
21025118	113	130	220	99

Source of information: Volvo's Parts Group. The information was gathered on August 17, 2011.

Note: Part numbers 21512736 and 21512737 are being used in safety recall RVXX1001 (NHTSA # 10V-286), which explains the high aftermarket sales.

14. Answer the following regarding the subject components' manufacturing process:
- Describe the bonding material(s) used to attach the subject components;
  - Describe the storage requirements of the bonding material;
  - Describe the process to prepare and apply the bonding material to the subject vehicles;
  - Describe any other special requirements of the bonding material;
  - State the shelf life of the bonding material;
  - Describe VOLVO's inventory management of the bonding material; and,
  - Provide supplier contact information for all bonding material used in the subject vehicles.

See enclosed excel spreadsheet entitled "Response to Question 14" and enclosed work instructions for applying, storing, and handling the adhesive.

Source of information: Volvo's Product Development Group. The information was last gathered on August 17, 2011.

Note: Information on the adhesive used by Water Bonnet was not available at the time of this submission.

15. *Furnish VOLVO's assessment of the alleged defect in the subject vehicle, including:*
- a. *The causal or contributory factor(s);*
  - b. *The failure mechanism(s);*
  - c. *The failure mode(s);*
  - d. *The risk to motor vehicle safety that it poses;*

Introduction: There are two designs. The first design is a "hinged design" where the occupant can open the window. Upper bunk windows of this design were used by Volvo from 1996 through February 6, 2009 and lower bunk windows of this design have been used by Volvo since 1996. Volvo has performed two safety recalls to address manufacturing defects where the bottom track that attaches to the arms used to open and close the window may de-bond. This can result in the glass coming loose at the bottom, which if left untreated can cause the two hinges at the top to fail and cause the glass to fall out. One of the recalls was released in 2003, Reference RVXX0302 (NHTSA# 03V-038), and the other in 2010, Reference RVXX1004 (NHTSA#10V-359). These windows were produced by Water Bonnet who also selected the adhesive which was used.

The second design is a "bonded in" design where the window cannot be opened. This design was introduced on February 9, 2009 and is used exclusively on the upper bunk. Volvo has performed one voluntary safety recall on this design to address a manufacturing defect where the activator was not correctly applied. This resulted in the adhesive not adhering to the window frame, which allowed the glass to fall out. This recall was released in 2010. Reference: RVXX1001 (NHTSA #10V-086). These windows are manufactured by Mack Molding with Volvo specifying the adhesive that is to be used.

Volvo has addressed the safety related defects through voluntary safety recalls and has therefore addressed the suspect population. Volvo's assessment is that since the defects are addressed, no further action is required. Volvo has also taken additional steps to secure the upper bunk window which involves using two fasteners to mechanically attach the glass to the window frame; this is a redundant measure.

*The causal or contributory factor(s);* Incorrect application of the adhesive or activator.

*The failure mechanism(s);* For the "hinged design", the bottom track that attaches to the arms used to open and close the window may de-bond. This can result in the glass coming loose at the bottom, which if left untreated can cause the two hinges at the top to fail. For the "bonded in" design, the adhesive may not adhere to the window frame.

*The failure mode(s);* The glass may come loose and then fall out.

*The risk to motor vehicle safety that it poses;* May result in a vehicle crash if the window strikes or is hit by another motor vehicle.

*What warnings, if any, the operator and the other persons both inside and outside the vehicle would have;* Water leaks, loose glass, and noise as window is hitting against the side of the truck.

*The reports included with this inquiry.* There were no reports included with this inquiry.

Source of information: Volvo's Regulatory Affairs Group. The information was last gathered on August 17, 2011.